OCS Oil Spill Facts

Statistics apply to crude oil only; 1 barrel (bbl) is equal to 42 gallons

Background

- ✓ A 1985 National Academy of Sciences study entitled “Oil in the Sea” stated that worldwide offshore oil and gas development is responsible for only 2 percent of the petroleum hydrocarbons in the world’s marine environment. Through its regulatory program, MMS is working diligently toward keeping this statistic as low as possible.

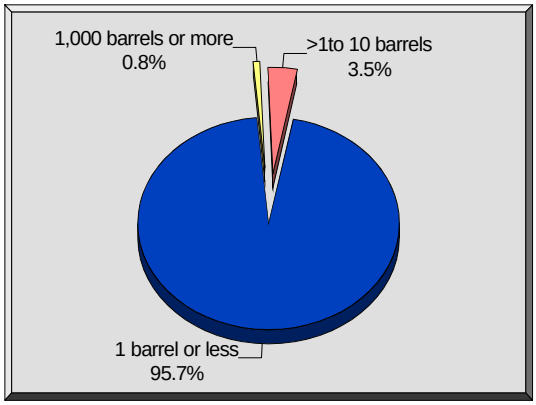
- ✓ On the U.S. Outer Continental Shelf (OCS), there are over 30,000 workers, 3,800 oil and gas production facilities and 18,000 miles of pipeline.

- ✓ The MMS regulatory program prevents accidents and pollution on the Federal OCS by
  - ensuring that every OCS operator’s exploration or development and production plan has an associated oil spill contingency plan that identifies response equipment, key personnel, and response procedures.
  - requiring operators to use the best and safest technologies on all new and, wherever practical, existing operations.
  - inspecting safety devices and systems, conducting oil-spill drills, and enforcing its regulations with a civil and criminal penalties program.

- ✓ In FY97, MMS will spend about $6 million for research on oil-spill prediction, prevention and response technology, oil-detection systems, in-situ burn technology, oil-collection methods, ocean circulation modeling, and oil transport simulation.

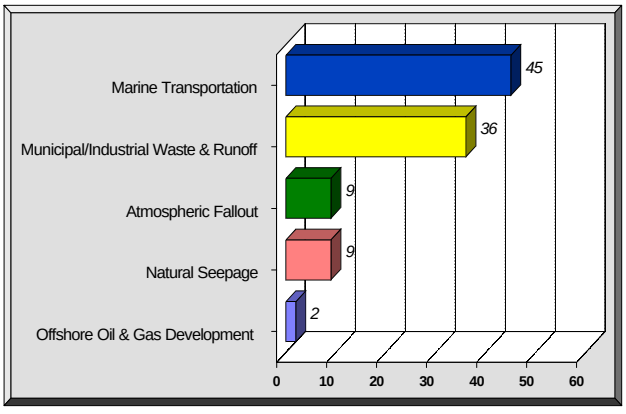
Oil Spills on the Federal OCS: 1980-95 Total

[Note: Most OCS spills are smaller than 1 barrel. However, most of the oil spilled comes from spills that are greater than 10 barrels.]



Petroleum Hydrocarbon Sources in the Worldwide Marine Environment

[by percentage contribution]



Source: National Academy of Sciences, 1985

◆ Federal OCS Activities and U.S. Natural Oil Seeps

- ✓ Seeps are found where oil and/or natural gas-bearing strata intersect the earth's surface, or where they are tapped by faults and fractures. Seeps are common in the Gulf of Mexico and offshore southern California.

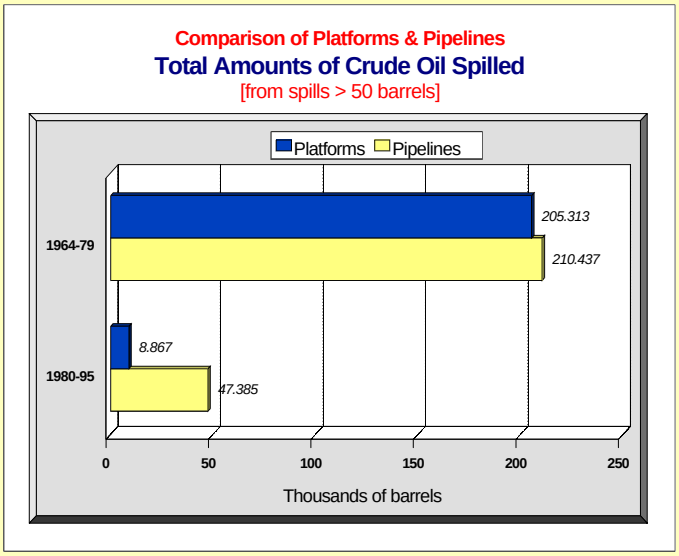
- ✓ About 1,000 barrels of oil seep naturally each day from the seabed into U.S. marine waters. Natural seeps introduce about 100 times more oil into U.S. marine waters than do OCS oil and gas activities.

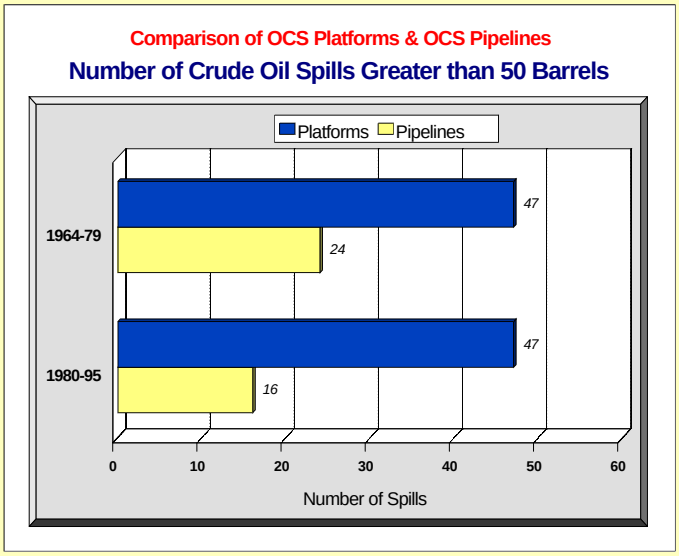
- ✓ Since 1980, an estimated 1 million barrels of oil seeped from 50 seepage sites in the offshore southern California region, whereas only 481 barrels spilled from the 23 active Federal OCS production platforms in the same region.

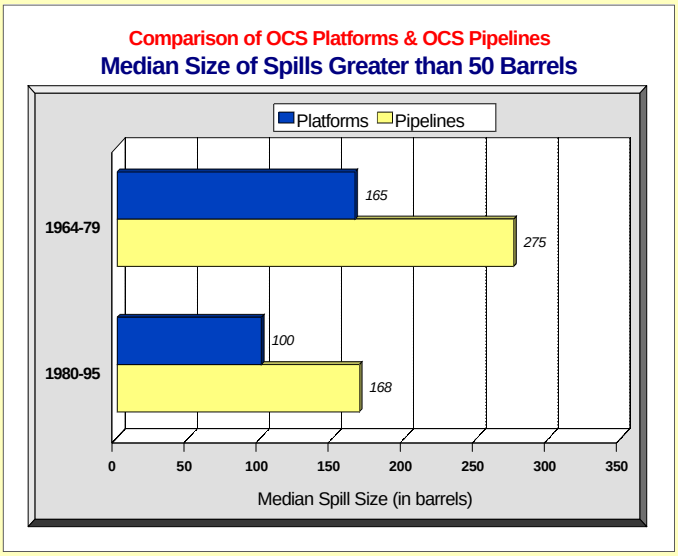
◆ Federal OCS Oil Spills: 1980–95

- ✓ Since 1980, OCS operators have produced about 5.5 billion barrels of oil. The amount of oil spilled totaled about 61,500 barrels (0.001%) or 1 barrel spilled for every 89,500 barrels produced.

- ✓ Spills of 50 barrels or more account for the majority of oil spilled from OCS facilities. From exploratory drilling activities, only one spill was greater than 50 barrels (100 bbl). From OCS platforms, only one spill was greater than 1,000 barrels (1,456 bbl). From OCS pipelines, six spills were greater than 1,000 barrels.

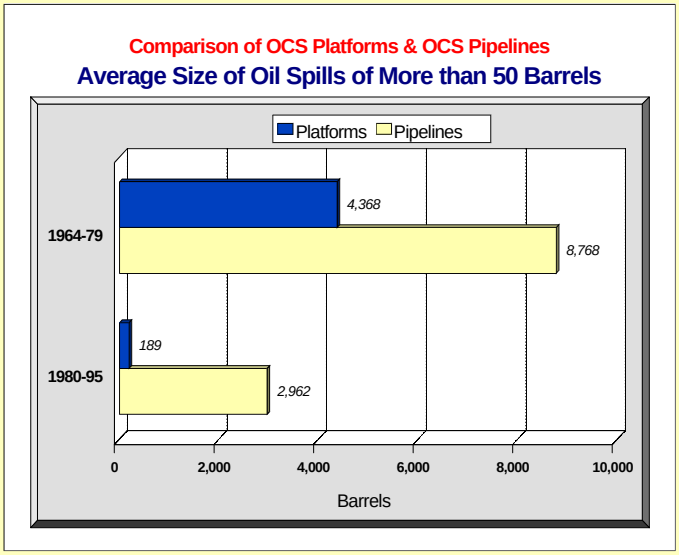






- ✓ Even after Hurricane Andrew in the Gulf of Mexico in 1992, where about 2,000 OCS platforms were exposed to the hurricane force winds and seas, oil spillage totaled only 2,500 barrels.

- ✓ Although production was less during 1965–79 than in 1980–95, statistical comparisons show a significant decline in the severity of platform and pipeline oil spills. From 1964–79, more than 400,000 barrels of crude oil were spilled from OCS platforms and pipelines compared to about 56,000 barrels spilled during 1980–95. (See charts at right).



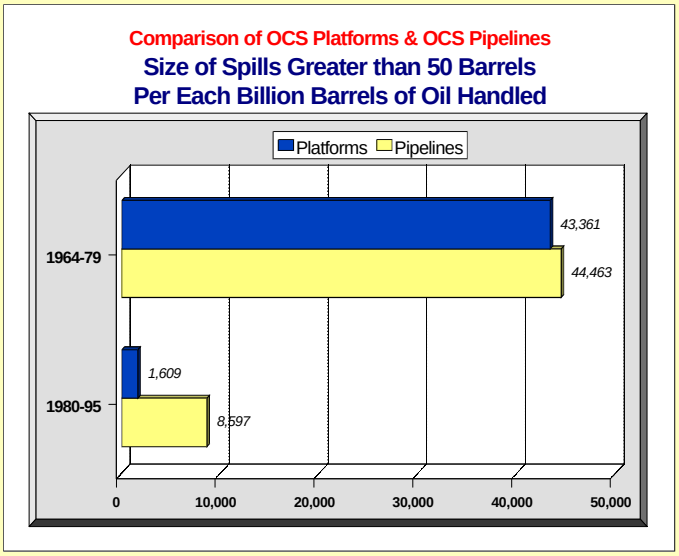
◆ Federal OCS Activities and Tankers

- ✓ How oil transport depends on the available infrastructure. In some cases, tankers are the only practical means of transporting production (e.g., Alaskan North Slope).

- ✓ Tanker spills tend to be larger events than those from OCS pipelines, and the majority of tanker spills occur in port or near shore where the potential environmental impact is more severe.

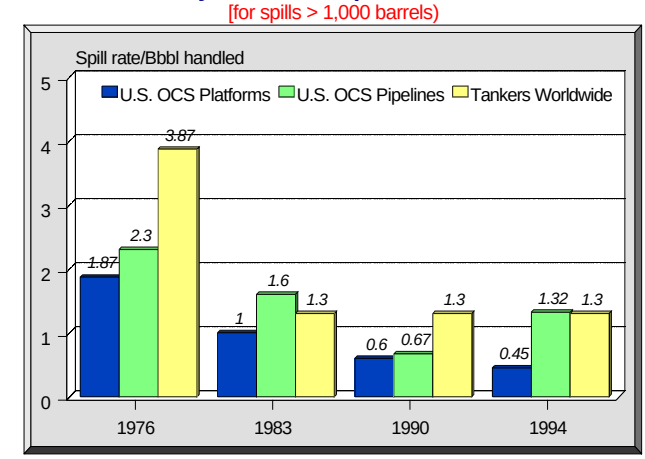
- ✓ From 1980–95, for every billion barrels of oil delivered, about 13,000 barrels spilled into U.S. Waters from tanker spills (≥1,000 barrels). This estimate does not account for spills outside U.S. waters from imported oil destined for the United States; whereas, tankers worldwide spilled about 76,500 barrels for every billion barrels delivered.

- ✓ More than 85 percent of oil spills greater than 1,000 barrels from OCS pipelines are caused by anchor damage from marine vessels. About 8,500 barrels spilled into U.S. waters from OCS pipelines spills of 1,000 barrels or more.



- ✓ Any comparison of relative risks of oil spills between OCS production and tanker movements of oil must recognize that about 65 percent of OCS energy production is natural gas, which poses little risk of pollution.

Oil Spills (1,000 barrels or greater) Occurrence Rates



- ✓ In 1994, MMS revised its oil-spill occurrence rates for spills of 1,000 barrels or greater. MMS uses oil-spill occurrence rates along with trajectory analyses to estimate the potential for spills occurring and contacting sensitive resources and in environmental analyses for pre- and postlease activities.

- ✓ Oil-spill occurrence rates measure the potential for an oil spill based on the key assumption that spills occur in direct proportion to the volume of oil handled. The rates are based on trend analyses, which show any significant changes in spill occurrence, if any. The rates are expressed as number of spills per billion barrels of oil handled.

- ✓ The historical record (1964–92) for OCS platform spill occurrences shows a statistically significant decline since 1973. The revised spill rates for OCS platforms were based on data from 1973–92.

- ✓ For OCS pipeline spills, four spill events between 1988 and 1992 reversed a decline in began in 1974 and continued through 1997. Because of this apparent trend reversal, the revised spill rate for pipelines includes the entire 1964–92 OCS pipeline spill record.

Spills Greater than 1,000 Barrels from OCS Oil & Gas Operations Since 1980

Year	Type of Accident	Spillage (bbl)	Location
1980	Platform pump failure, tank overflow	1456	High Island
1981	Pipeline anchor damage	5100	South Pass
1988	Pipeline anchor damage	15576	Galveston
1990	Pipeline anchor damage	*14,423	Ship Shoal
1990	Pipeline trawl damage to valve	4569	Eugene Island
1992	Pipeline hurricane damage	2000	South Pelto
1994	Pipeline trawl damage	*4,533	Ship Shoal

* Condensate Spill

- ✓ The OCS platform spill rate continues to decline, with no spills of 1,000 barrels or greater occurring since 1980.

- ✓ The average spill size for OCS platform and pipelines spills is 7,000 barrels.

- ✓ From 1980–95, the rates for tanker spills worldwide have remained constant, with the average spill size for spills 1,000 barrels or greater being more than 86,000 barrels (26,000 bbl in U.S. waters).